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ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/6 4/2  
19304A MLRS, MISSILE NUMBER 1135, ROUND NUMBER V-103, 15 JANUAR--ETC(U)  
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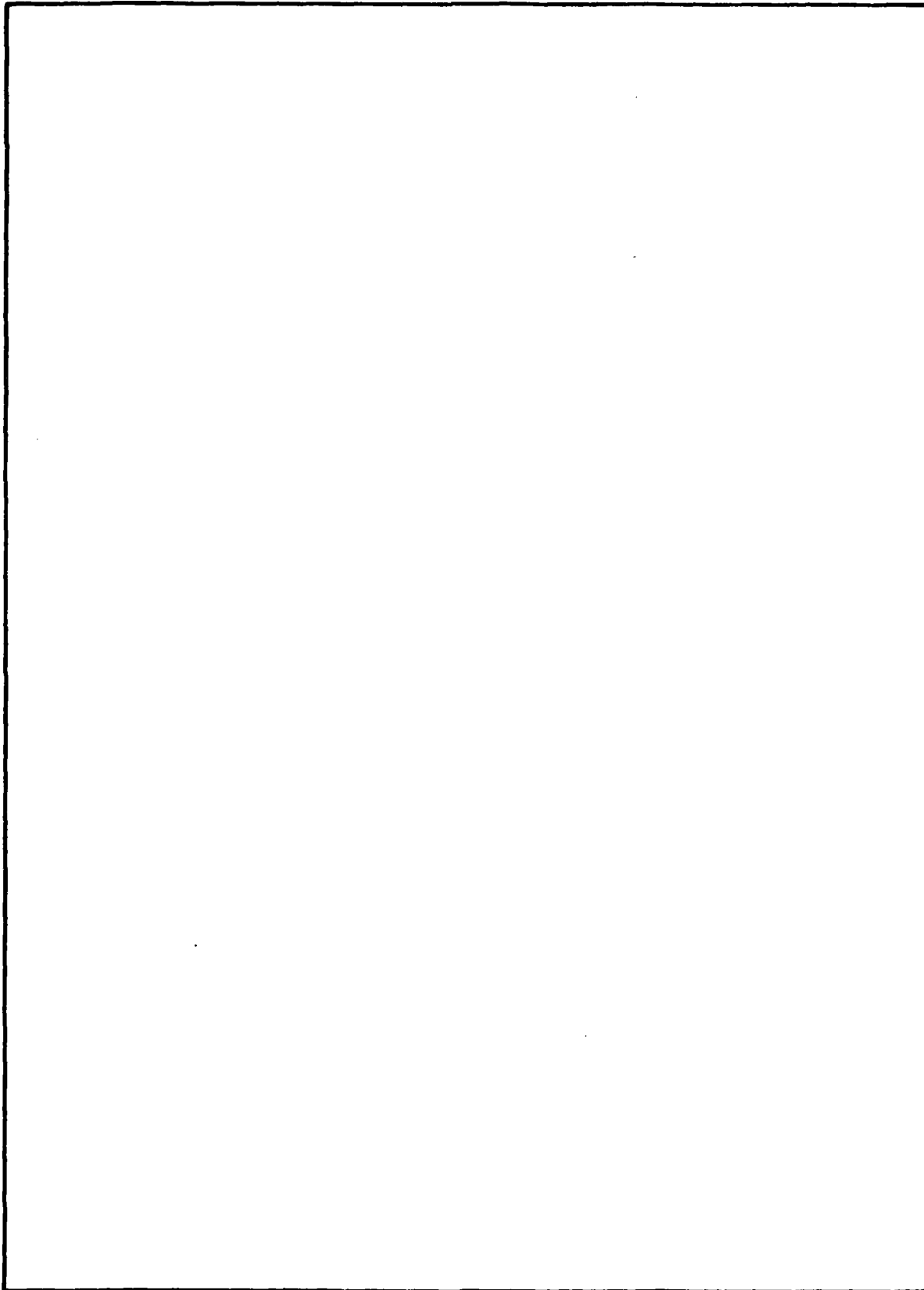
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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 19304A MLRS, Missile Number 1135, Round Number V-103 are presented in tabular form.		

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## INTRODUCTION

19304A MLRS, Missile Number 1135, Round Number V-103,  
was launched from LC-33, White Sands Missile Range (WSMR), New Mexico,  
at 1434 MST on 15 January 1980. The scheduled launch time was  
1430 MST.

## DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team. Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

### 1. Observations

#### a. Surface

(1) Standard surface observations to include pressure, temperature ( $^{\circ}\text{C}$ ), relative humidity, dew point ( $^{\circ}\text{C}$ ), density ( $\text{gm/m}^3$ ), Wind direction and speed, and cloud cover were made at the LC-33 Met Site at T-0 minutes.

(2) Anemometer data were provided from existing pole-mounted and tower-mounted anemometers at LC-33. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

#### b. Upper Air

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

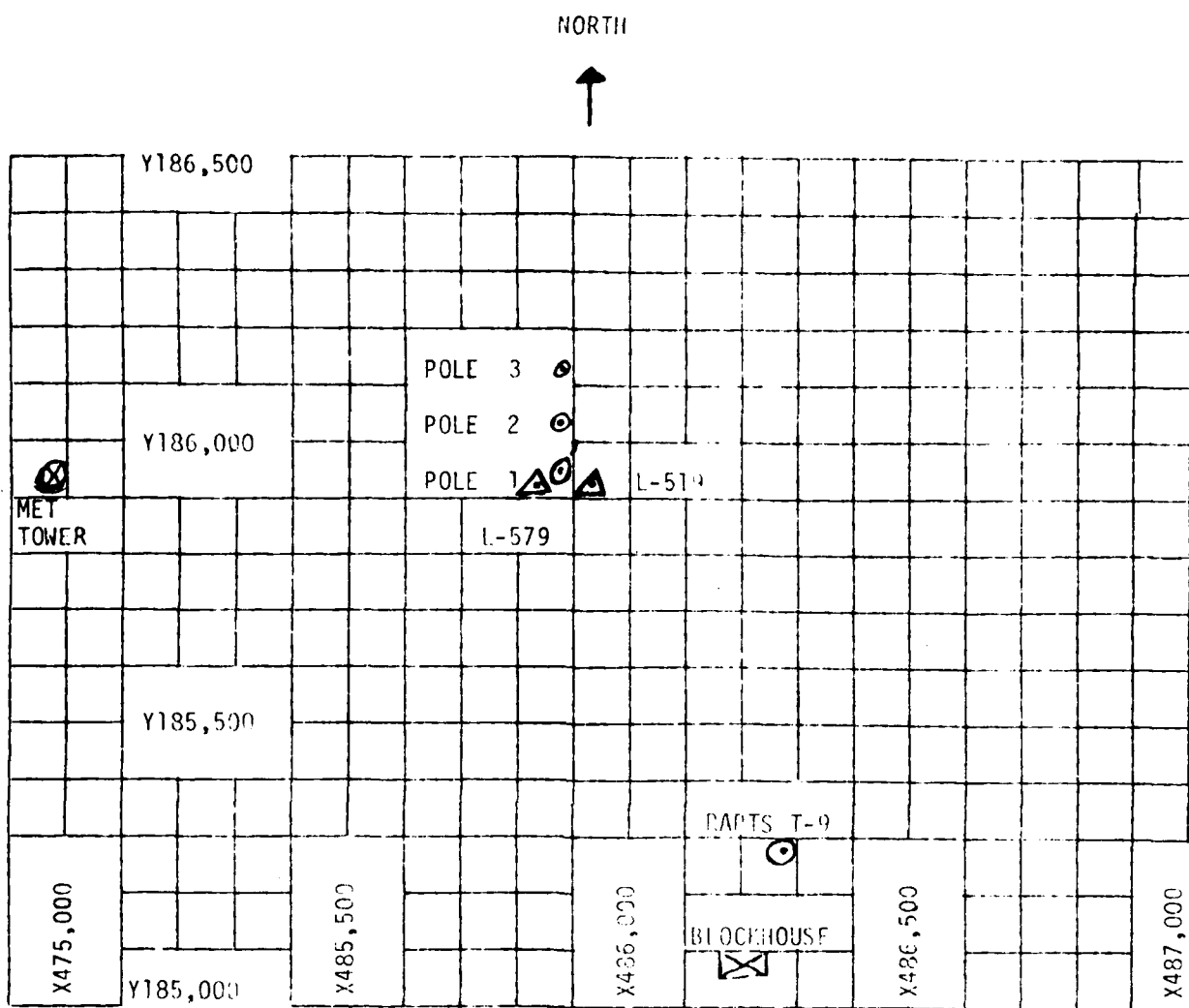
### SITE AND ALTITUDE

LC-33	2km
Nick	2km

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to 87,000 feet in 500-foot increments.

### SITE AND TIME

SMR 1430 MST



1. MET TOWER - 4 Bendix Model T-20 Anemometers at 12 ft, 62 ft, 102 ft, and 202 ft with E/A recorders.
2. POLE ANEMOMETER - Bendix Model T-120 with E/A recorders.
  - (a) Pole #1 - 38.7 ft.
  - (b) Pole #2 - 53.0 ft.
  - (c) Pole #3 - 83.6 ft.
3. RAPTS T-9 Radar Automatic Pilot-Balloon Tracking System T-9 Radar.



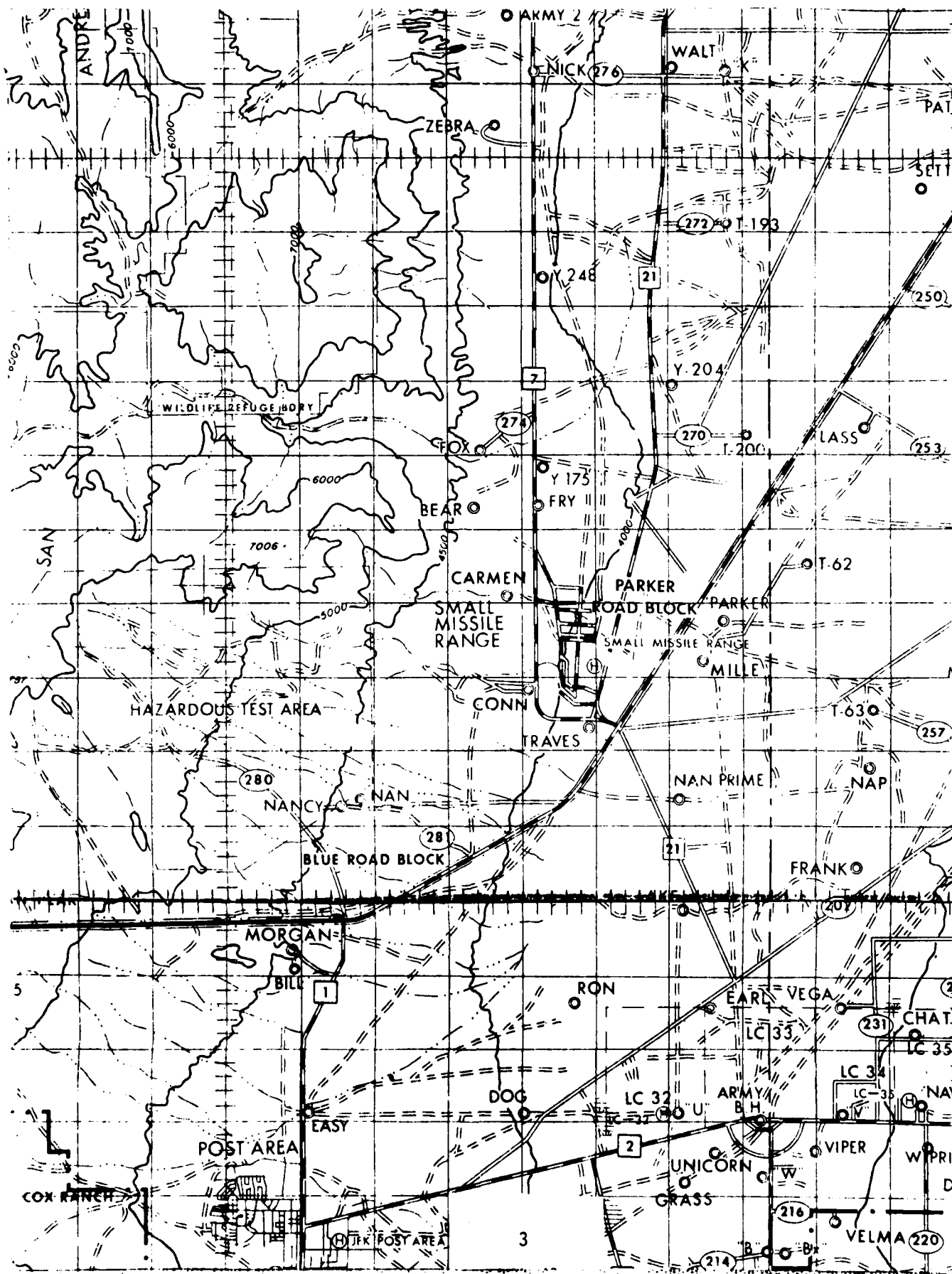


TABLE 1. Surface Observations taken at 1434 MST,  
15 January 1980, at LC-33, 19304A MLRS,  
Missile Number 1135, Round Number V-103.

ELEVATION	3977.30	FT/MSL
PRESSURE	876.6	MBS
TEMPERATURE	17.2	°C
RELATIVE HUMIDITY	40	%
DEW POINT	3.6	°C
DENSITY	1046	GM/M <sup>3</sup>
WIND SPEED	12	KTS
WIND DIRECTION	240	DEGREES
CLOUD COVER	5	Cu

TABLE 2 LC-33 FIXED POLE ANEMOMETER MEASURED WINDS

POLE #1 X485,874.29 Y185,958.90 H4018.74 38.7 ft. AGL			POLE #2 X485,874.93 Y186,012.00 H4033.57 53.0 ft. AGL			POLE #3 X485,877.29 Y186,116.06 H4063.92 83.6 ft. AGL		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	249	23	-30	252	16	-30	246	15
-20	248	18	-20	265	16	-20	250	15
-10	253	18	-10	270	15	-10	242	16
0.0	240	19	0.0	269	12	0.0	243	17
+10	238	19	+10	272	16	+10	246	13

TABLE 3 LC-33 METEOROLOGICAL TOWER ANEMOMETER MEASURED WINDS (202 FT TOWER)

LEVEL #1, 12 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #2, 62 FEET X484,982.64, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	231	14	-30	245	18
-20	231	16	-20	258	16
-10	225	14	-10	252	18
0.0	249	12	0.0	249	14
+10	247	11	+10	252	19

LEVEL #3, 102 FEET X484,982.64, Y185,057.73, H3983.00 (base)			LEVEL #4, 202 FEET X484,982, Y185,057.73, H3983.00 (base)		
T-TIME SEC	DIR DEG	SPEED KTS	T-TIME SEC	DIR DEG	SPEED KTS
-30	246	18	-30	242	19
-20	251	16	-20	242	20
-10	248	20	-10	243	21
0.0	250	20	0.0	242	21
+10	247	18	+10	239	21

## PILOT BALLOON MEASURED WIND DATA

TABLE 4

RELEASED FROM LC-33                      DATE 15 January 1980                      TIME 1435 MST

TRACKER COORDINATES (WSTM) X= 486,037.24 Y= 182,350.16 Z= 3977.30

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XX OR FEET AGL.

[illegible][illegible][illegible]

## PILOT BALLOON MEASURED WIND DATA

TABLE 5

RELEASED FROM Nick Site

DATE 15 January 1980

TIME 1435 MST

## TRACKER

COORDINATES (WSTM)

$$\chi = 470,734.56$$
$$Y = 255,775.64$$

4126.57

NOTE: WIND DIRECTIONS ARE REFERENCED TO TRUE NORTH.

HEIGHTS ARE METERS AGL XX OR FEET AGL .

[illegible][illegible][illegible]

STATION ALTITUDE 3997.30 FEET MSL  
15 JAN. 60  
ASCENSION NO. 8

SIGNIFICANT LEVEL DATA  
0150060008  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

TABLE 6

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
875.9	16.3	2.3	39.0
850.0	13.6	-0.8	37.0
732.9	1.6	-4.5	64.0
721.6	.0	-6.0	61.0
700.0	-2.0	-5.1	79.0
686.7	-3.2	-6.5	78.0
677.7	-3.7	-9.3	65.0
632.7	-7.0	-27.9	17.0
572.4	-12.9	-32.2	18.0
539.2	-14.0	-34.3	16.0
500.0	-17.9	-36.9	17.0
417.1	-28.9	-44.7	20.0
400.0	-29.8	-46.4	18.0
367.9	-33.0	-50.7	15.0
322.9	-34.3		
303.4	-38.8		
300.0	-36.9		
292.7	-36.9		
281.1	-34.9		
269.7	-34.5		
256.6	-37.3		
250.0	-36.9		
242.7	-37.1		
207.7	-40.8		
200.0	-43.0		
184.9	-44.7		
167.7	-49.3		
150.0	-56.4		
143.7	-56.2		
108.6	-62.5		
100.0	-67.2		
87.4	-71.7		
76.3	-67.3		
70.0	-70.4		
63.3	-71.9		
58.3	-69.3		
53.4	-63.3		
50.0	-61.9		
41.4	-61.0		
34.4	-58.4		

ORIGIN ALTITUDE 3997.30 FEET MSL  
 15 JAN. 80 1430 HRS MST  
 ASCENSION NO. 8

SIGNIFICANT LEVEL DATA  
 0150060000  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LON DEG

TABLE 6 (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
30.0 78555.3	-59.3		
20.0 87133.3	-50.4		

STATION ALTITUDE 3997.3 FEET MSL  
 19. MAY 1960  
 ASCENSION NO. 8

STATION AIR DATA  
 UPPER AIR DATA  
 0150060008  
 S M R

GEODETIC COORDINATES  
 12:4834 LAT DEG  
 106:42307 LON DEG

TABLE 7

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	DENSITY GM/CM <sup>3</sup>	SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
3997.3	875.9	16.3	39.0	1050.9	663.8	260.0	9.9	1.000267
4000.0	875.9	16.3	39.0	1050.8	663.8	260.0	9.9	1.000267
4500.0	860.2	14.7	37.8	1038.2	661.9	258.0	10.8	1.000260
5000.0	844.7	13.1	33.1	1025.4	660.0	256.0	11.7	1.000255
5500.0	829.3	11.6	41.5	1011.9	658.2	254.9	12.6	1.000252
6000.0	814.1	10.1	44.9	998.6	656.3	253.0	13.4	1.000249
6500.0	799.2	8.6	48.2	985.6	654.8	254.6	14.1	1.000245
7000.0	784.6	7.1	51.6	972.8	653.0	262.0	14.3	1.000242
7500.0	770.2	5.6	55.0	960.1	651.3	269.0	14.7	1.000238
8000.0	756.1	4.1	58.3	947.7	649.5	274.1	15.9	1.000235
8500.0	742.3	2.6	61.7	935.5	647.7	278.1	17.4	1.000231
9000.0	728.6	1.0	62.9	923.9	645.7	281.1	18.5	1.000227
9500.0	714.9	-0.6	66.5	911.9	643.8	283.5	19.4	1.000223
10000.0	701.4	-1.9	77.8	893.7	642.4	285.6	20.5	1.000222
10500.0	688.1	-3.1	78.1	885.7	640.9	288.1	21.8	1.000217
11000.0	675.0	-3.9	62.2	871.9	639.8	290.2	23.6	1.000209
11500.0	662.0	-4.8	48.7	853.5	638.5	292.1	25.8	1.000202
12000.0	649.3	-5.8	35.1	845.3	637.3	294.4	27.8	1.000196
12500.0	636.9	-6.7	21.6	832.2	636.1	296.2	29.6	1.000190
13000.0	624.3	-7.8	17.1	819.5	634.8	295.4	30.3	1.000186
13500.0	612.3	-8.9	17.3	807.0	633.4	293.2	30.7	1.000183
14000.0	600.3	-10.1	17.5	794.8	632.0	289.1	30.7	1.000180
14500.0	588.6	-11.3	17.7	782.7	630.6	286.7	30.6	1.000177
15000.0	577.1	-12.4	17.9	770.9	629.1	286.1	30.2	1.000174
15500.0	565.8	-13.1	17.6	757.7	628.3	287.1	28.9	1.000171
16000.0	554.6	-13.5	16.9	743.8	627.9	289.6	26.8	1.000168
16500.0	543.6	-13.9	16.3	730.1	627.4	292.0	25.0	1.000165
17000.0	532.8	-14.6	16.2	717.7	626.5	293.5	23.4	1.000162
17500.0	522.1	-15.7	16.4	706.3	625.2	294.0	21.8	1.000159
18000.0	511.7	-16.7	16.7	695.0	623.9	295.1	20.3	1.000156
18500.0	501.3	-17.7	17.0	683.9	622.7	294.7	18.5	1.000154
19000.0	491.2	-19.0	17.3	673.1	621.2	293.5	16.5	1.000151
19500.0	481.1	-20.2	17.6	662.0	619.6	292.1	15.8	1.000149
20000.0	471.2	-21.5	18.0	652.2	618.1	290.8	15.7	1.000146
20500.0	461.5	-22.8	18.3	642.0	616.5	292.2	18.9	1.000144
21000.0	452.0	-24.0	18.7	632.0	614.9	293.5	22.2	1.000142
21500.0	442.7	-25.3	19.0	622.2	613.4	295.6	24.8	1.000139
22000.0	433.6	-26.5	19.4	612.5	611.8	297.0	26.8	1.000137
22500.0	424.7	-27.8	19.7	603.0	610.3	297.1	26.1	1.000135
23000.0	416.0	-29.0	19.9	593.3	608.8	295.6	25.9	1.000133



UPPER AIR DATA  
0150000006  
S M R

GEODETIC COORDINATES  
32.4034 LAT DEG  
106.42307 LON DEG

STATION ALTITUDE 3997.30 FEET MSL  
15 JAN. 80 1430 HRS MST  
STATION NO. 8

TABLE 7 (CONT)

TIME	ALTITUDE FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
235000.0	407.2	-29.4	-45.6	18.9	581.9	608.2	290.1	27.1	1.000130
240000.0	398.6	-29.9	-46.6	17.9	570.9	607.6	286.9	30.6	1.000128
245000.0	390.1	-30.8	-47.6	17.1	560.7	606.0	286.8	37.3	1.000125
250000.0	381.9	-31.6	-48.7	16.3	550.6	605.5	289.9	42.8	1.000123
255000.0	373.8	-32.4	-49.8	15.6	540.8	604.5	294.8	47.6	1.000121
260000.0	365.8	-33.2	-51.2	14.3**	531.1	603.4	297.6	51.0	1.000119
265000.0	357.9	-34.1	-53.6	11.8**	521.6	602.3	299.8	53.0	1.000116
270000.0	350.2	-35.0	-56.2	9.3**	512.2	601.2	300.9	54.4	1.000114
275000.0	342.6	-35.9	-59.4	6.8**	503.0	600.1	301.2	55.4	1.000112
280000.0	335.2	-36.8	-63.5	4.3**	494.0	599.0	302.0	55.2	1.000110
285000.0	327.9	-37.7	-70.4	1.8**	485.2	597.8	303.3	53.5	1.000108
290000.0	320.8	-38.3			476.0	597.0	304.1	51.5	1.000106
295000.0	313.8	-38.4			465.8	596.8	303.5	49.0	1.000104
300000.0	307.0	-38.5			455.8	596.7	301.8	47.3	1.000102
305000.0	300.3	-37.0			443.0	598.6	298.5	47.2	1.000099
310000.0	293.8	-36.9			433.2	598.8	295.5	47.6	1.000096
315000.0	287.4	-36.0			422.2	599.9	292.8	48.5	1.000094
320000.0	281.2	-34.9			411.2	601.3	290.6	48.0	1.000092
325000.0	275.1	-34.7			402.0	601.8	288.7	46.1	1.000090
330000.0	269.2	-34.6			393.2	601.7	286.4	44.0	1.000088
335000.0	263.4	-35.8			386.6	600.2	282.6	41.2	1.000086
340000.0	257.7	-37.1			380.3	598.6	278.3	38.8	1.000085
345000.0	252.1	-37.0			372.0	596.6	278.8	40.8	1.000083
350000.0	246.6	-37.0			363.8	598.7	279.2	42.9	1.000081
355000.0	241.3	-37.2			356.3	598.4	280.9	46.5	1.000079
360000.0	236.0	-37.8			349.3	597.7	282.7	50.5	1.000078
365000.0	230.8	-38.3			342.4	597.0	283.3	52.1	1.000076
370000.0	225.8	-38.8			335.6	596.4	283.3	52.1	1.000075
375000.0	220.6	-39.3			329.0	595.7	282.9	51.6	1.000073
380000.0	216.0	-39.9			322.6	595.0	281.8	50.1	1.000072
385000.0	211.3	-40.4			316.2	594.4	280.6	48.8	1.000070
390000.0	206.6	-41.1			310.2	593.5	278.5	48.5	1.000069
395000.0	202.1	-42.4			305.1	591.8	278.3	48.2	1.000068
400000.0	197.6	-43.3			299.4	590.7	274.0	49.1	1.000067
405000.0	193.2	-43.8			293.3	590.0	273.4	50.0	1.000065
410000.0	188.8	-44.2			287.4	589.4	273.1	52.8	1.000064
415000.0	184.6	-44.8			281.6	588.7	277.0	55.9	1.000063
420000.0	180.4	-45.9			276.5	587.3	279.1	58.1	1.000062
425000.0	176.4	-46.9			271.6	585.9	281.0	60.2	1.000060
430000.0	172.4	-48.0			266.7	584.6	280.8	59.2	1.000059

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 9997.30 FEET MSL  
 15 JAN 60 1430 HRS MST  
 SCENSION NO. 8

UPPER AIR DATA  
 0150060008  
 S M R

TABLE 7 (CONT)

GEOMETRIC ALTITUDE FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup>	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
43500.0	160.5	-49.1		261.9	583.1	280.3	58.1	1.000058
44000.0	164.6	-50.5		257.5	581.3	280.8	57.7	1.000057
44500.0	168.7	-52.0		253.2	579.3	281.3	57.4	1.000056
45000.0	157.0	-53.5		249.0	577.4	281.7	57.4	1.000055
45500.0	153.4	-55.0		244.9	575.4	282.0	57.5	1.000055
46000.0	149.8	-56.4		240.7	573.6	282.4	57.3	1.000054
46500.0	146.3	-58.3		234.9	573.7	283.5	54.1	1.000052
47000.0	142.8	-58.5		229.4	573.9	285.0	50.9	1.000051
47500.0	139.4	-56.9		224.5	572.9	285.9	47.3	1.000050
48000.0	136.0	-57.4		219.7	572.2	286.5	43.6	1.000049
48500.0	132.8	-58.0		215.0	571.5	286.1	41.1	1.000048
49000.0	129.6	-58.5		210.4	570.7	284.3	40.2	1.000047
49500.0	126.5	-59.1		205.9	570.0	282.6	39.3	1.000046
50000.0	123.5	-59.6		201.5	569.3	281.4	38.5	1.000045
50500.0	120.5	-60.2		197.1	568.0	280.3	37.8	1.000044
51000.0	117.7	-60.7		192.9	567.8	278.3	34.6	1.000043
51500.0	114.8	-61.2		188.8	567.1	275.8	31.4	1.000042
52000.0	112.1	-61.8		184.7	566.4	272.1	24.5	1.000041
52500.0	109.4	-62.3		180.8	565.7	264.2	15.9	1.000040
53000.0	106.7	-63.5		177.4	564.1	245.8	9.1	1.000040
53500.0	104.1	-64.9		174.2	562.2	213.5	6.1	1.000039
54000.0	101.5	-66.3		171.1	560.3	185.6	6.6	1.000038
54500.0	99.1	-67.5		167.6	558.7	167.3	6.5	1.000037
55000.0	96.6	-68.4		164.3	557.5	177.7	6.1	1.000037
55500.0	94.2	-69.2		160.8	556.3	199.2	5.9	1.000036
56000.0	91.8	-70.1		157.5	555.2	229.9	7.2	1.000035
56500.0	89.5	-70.9		154.2	554.0	246.2	9.6	1.000034
57000.0	87.3	-71.6		150.8	553.0	250.3	11.7	1.000034
57500.0	85.1	-70.8		146.5	554.1	253.1	13.9	1.000033
58000.0	82.9	-70.0		142.2	555.3	246.0	11.8	1.000032
58500.0	80.9	-69.2		138.1	556.4	235.7	9.8	1.000031
59000.0	78.8	-68.4		134.1	557.5	221.5	7.3	1.000030
59500.0	76.8	-67.5		130.2	558.6	194.2	5.2	1.000029
60000.0	74.9	-68.0		127.2	558.1	149.5	5.7	1.000028
60500.0	73.1	-69.9		124.6	558.8	121.9	9.3	1.000028
61000.0	71.2	-69.8		122.0	555.6	111.2	13.6	1.000027
61500.0	69.4	-70.5		119.4	554.6	108.4	13.6	1.000027
62000.0	67.7	-70.9		116.6	554.0	105.7	14.1	1.000026
62500.0	66.0	-71.5		113.9	553.5	103.1	12.8	1.000025
63000.0	64.5	-71.7		111.2	553.0	99.7	11.0	1.000025

STATION ALTITUDE 3997.30 FEET MSL  
15 JAN. 80 1430 HRS MST  
ASCENSION NO. 8

UPPER AIR DATA  
0150060000  
S M R

GEODETIC COORDINATES  
32.48034 LAT DEG  
106.42307 LON DEG

TABLE 7 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CM <sup>3</sup> METER	SPEED OF SOUND M/SEC	WIND DATA DIRECTION DEGREES (T)	SPEED KNOTS	INDEX OF REFRACTION
03500.0	62.7	-71.6		109.3	553.1	98.3	9.9	1.000024
04000.0	61.1	-70.8		105.2	554.2	105.1	10.7	1.000023
04500.0	59.6	-70.0		102.1	555.3	111.0	11.6	1.000023
05000.0	58.1	-69.0		99.1	556.6	120.1	12.6	1.000022
05500.0	56.6	-67.3		95.9	558.9	128.7	13.9	1.000021
06000.0	55.2	-65.6		92.7	561.2	134.1	14.8	1.000021
06500.0	53.9	-63.9		89.7	563.5	135.1	14.3	1.000020
07000.0	52.6	-63.0		87.1	564.8	136.2	13.0	1.000019
07500.0	51.3	-62.4		84.8	565.5	134.3	11.0	1.000019
08000.0	50.0	-61.9		82.5	566.2	129.3	7.6	1.000018
08500.0	48.8	-61.8		80.5	566.4	118.5	4.2	1.000018
09000.0	47.7	-61.7		78.5	566.5	74.4	1.3	1.000017
09500.0	46.5	-61.6		76.6	566.7	337.5	3.0	1.000017
10000.0	45.4	-61.4		74.7	566.8	344.6	4.7	1.000017
10500.0	44.3	-61.3		72.9	567.0	350.4	6.1	1.000016
11000.0	43.2	-61.2		71.1	567.2	5.0	7.4	1.000016
11500.0	42.2	-61.1		69.3	567.3	10.3	7.9	1.000015
12000.0	41.2	-60.9		67.6	567.5	29.6	8.7	1.000015
12500.0	40.2	-60.6		65.9	568.0	33.0	9.1	1.000015
13000.0	39.2	-60.2		64.2	568.4	32.9	9.0	1.000014
13500.0	38.3	-59.9		62.6	568.9	32.2	9.2	1.000014
14000.0	37.4	-59.6		61.0	569.4	27.5	10.7	1.000014
14500.0	36.5	-59.2		59.4	569.8	24.0	12.3	1.000013
15000.0	35.6	-58.9		57.9	570.3	20.9	13.0	1.000013
15500.0	34.8	-58.5		56.4	570.7	17.6	12.9	1.000013
16000.0	33.9	-58.5		55.1	570.8	14.4	12.9	1.000012
16500.0	33.1	-58.6		53.8	570.6	13.7	12.7	1.000012
17000.0	32.3	-58.8		52.6	570.4	12.8	12.5	1.000011
17500.0	31.6	-59.0		51.3	570.2	9.0	12.5	1.000011
18000.0	30.8	-59.1		50.2	569.9	4.6	12.8	1.000011
18500.0	30.1	-59.3		49.0	569.7	.1	13.3	1.000011
19000.0	29.4	-58.8		47.8	570.3	354.0	13.6	1.000011
19500.0	28.7	-58.3		46.5	571.0	348.0	14.0	1.000010
20000.0	28.0	-57.8		45.3	571.7	342.6	14.7	1.000010
20500.0	27.4	-57.3		44.2	572.4	337.8	15.6	1.000010
21000.0	26.7	-56.8		43.0	573.1	333.5	16.6	1.000010
21500.0	26.1	-56.2		41.9	573.8	330.0	17.6	1.000009
22000.0	25.5	-55.7		40.8	574.4	327.0	18.7	1.000009
22500.0	24.9	-55.2		39.8	575.1	324.4	19.8	1.000009
23000.0	24.3	-54.7		38.8	575.8	323.7	20.3	1.000009

STATION ALTITUDE 3997.30 FEET MSL  
 15 JAN. 80  
 ASCENSION NO. 8

UPPER AIR DATA  
 0150000000  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT DEG  
 106.42307 LONG DEG

TABLE 7 (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES(TN)	SPEED KNOTS	
83500.0	23.7	-54.2		37.8	576.5	323.2	20.7	1.000008
84000.0	23.2	-53.7		36.8	577.2	321.6	21.1	1.000008
84500.0	22.7	-53.1		35.9	577.9	315.6	21.9	1.000008
85000.0	22.1	-52.6		34.9	578.5	310.1	22.8	1.000008
85500.0	21.6	-52.1		34.0	579.2			1.000008
86000.0	21.1	-51.6		33.2	579.9			1.000007
86500.0	20.6	-51.1		32.3	580.8			1.000007
87000.0	20.1	-50.5		31.5	581.3			1.000007

STATION ALTITUDE 3997.30 FEET MSL  
 15 JAN. 80  
 ASCENSION NO. 8

MANDATORY LEVELS  
 0150060000  
 S M R

GEODETIC COORDINATES  
 32.48034 LAT UEG  
 106.42307 LON UEG

TABLE 8

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
		AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS
850.0	4828.	13.6	-0.8	37.	256.9	11.4
800.0	6489.	8.7	-1.7	48.	254.6	14.1
750.0	8224.	3.5	-3.6	60.	276.0	16.6
700.0	10043.	-2.0	-5.1	79.	286.0	20.6
650.0	11964.	-5.7	-18.4	36.	294.2	27.6
600.0	14005.	-10.1	-30.1	18.	289.0	30.7
550.0	16187.	-13.6	-33.6	17.	291.0	26.0
500.0	18547.	-17.9	-36.9	17.	294.6	18.3
450.0	21100.	-24.3	-41.3	19.	294.0	22.8
400.0	23880.	-29.8	-46.4	18.	287.0	29.4
350.0	26970.	-35.0	-56.3	9.**	300.9	54.4
300.0	30461.	-36.9			298.5	47.2
250.0	34617.	-36.9			273.9	41.6
200.0	39634.	-43.0			275.7	48.6
175.0	42565.	-47.3			281.1	60.1
150.0	45847.	-56.4			282.2	57.6
125.0	49627.	-59.3			282.0	38.9
100.0	54147.	-67.2			153.3	6.8
80.0	58508.	-68.8			231.3	9.1
70.0	61133.	-70.4			109.5	13.7
60.0	64126.	-70.2			109.0	11.2
50.0	67764.	-61.9			129.5	7.7
40.0	72306.	-60.5			33.0	9.1
30.0	78222.	-59.3			360.0	13.3
25.0	82004.	-55.3			325.3	19.4
20.0	86728.	-50.4				

\*\* AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.